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AUTHOR Diessner, Rhett
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ABSTRACT

This paper examines the moral reasoning of preservice and inservice teachers; reviews and summarizes empirical studies that have examined teachers' levels of principled reasoning; relates that information to the construction of democratic classrooms, which are a critique of both authoritarian and status quo democratic systems; and presents implications for teacher education programs. A computer search of the ERIC and PsychInfo databases yielded 30 studies on the use of 2 systematically validated measures of principled moral reasoning: (1) the "Defining Issues Test (DIT)," based on Kohlberg's stage theory, which measures receptive moral reasoning; and (2) the "Moral Judgment Interview (MJI)" which measures expressive moral reasoning. A summary of these studies indicates that most teachers cannot spontaneously reconstruct democratic systems in their schools nor critique the ideology structuring their schools. However, when school leaders advocate a principled critique of status quo social structures, teachers have the ability to collaborate toward that end. Four appendixes provide annotated reference lists of all articles identified through the search that utilized MJI or DIT scores in assessing in-service or pre-service teachers' moral reasoning. (Contains approximately 60 references.) (LL)

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DRAFT

Teacher Education for Democratic Classrooms: Moral Reasoning and Ideology Critique

Rhett Diessner

Lewis-Clark State College

Lewiston, ID 83501

A Seminar presented at the 16th Annual Conference of The Association for Moral Education, Athens, Georgia November 1991

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Abstract

An exhaustive computer search of ERIC and PsychInfo revealed 30 studies that describe means or ranges of teachers' moral reasoning on either the Moral Judgement Interview or the Defining Issues Test. A summary of these studies indicates that teachers' expressive moral reasoning (Kohlberg, 1984) is at the conventional level, within interpersonally normative stage 3 or social system stage 4; and that their receptive moral reasoning (Rest, 1986)indicates a preference, 30-50% of the time, for postconventional, principled thought. This implies that most teachers cannot spontaneously reconstruct democratic systems (Power, Higgins, & Kohlberg, 1989) in their schools nor critique the ideology structuring their schools (Giroux, 1988); but that they can recognize the importance of, and collaborate in, doing so. Reviews of studies with dilemma discussion (Galbraith & Jones, 1976) and/or Deliberate Psychological Education (Mosher & Sprinthall, 197o) with in- and pre- service teachers does indicate small to moderate effect sizes for increasing the development of principled thought. Concerns about other methods of impacting teacher education programs are presented.

Teacher Education for Democratic Classrooms: Moral Reasoning and Ideology Critique

One of Dewey's most frequent, and strongest, advocacies was for American education to teach democracy through the democratic structure of the classroom interactions (Dewey, 1909, 1966/1916, 1974, 1975/1909). More recently this mission has been asserted by Kohlberg and colleagues (Power, Higgins, & Kohlberg, 1989; Reimer, Paolitto, & Hersh, 1983; Kohlberg 1981; 1984). Likewise, critical theory in the Americas (Friere, 1970; Giroux, 1988) encourages classrooms to be democracies in action, with an emphasis on critique of the ideology of the structure of education in relation to politics and culture.

The neo-Piagetians have demonstrated that it is necessary to think in a morally principled (Kohlberg, 1984; Colby & Kohlberg, 1987; Power, Higgins, & Kohlberg, 1989), inter-individual (Kegan, 1982), dialectical (Basseches, 1984) manner in order to critique ideology and to able to create, rather than maintain, the political culture of the classroom. In Kohlbergian terms, the teacher thinking at the conventional levels, the interpersonally normative

(stage 3) and the social system (stage 4), is subject to ideology, and maintains the school's and society's conventions. At the postconventional, principled stage (stage 5, social contract) the teacher can take ideology as an object of their thought (Kegan, 1982), and can go beyond societal maintenance to societal reconstruction.

The present author is interested in designing teacher education so that it will assist teachers to be able to construct a progressive democratic climate in their classrooms. To do so, this paper will review and summarize empirical studies that have examined teachers' levels of principled reasoning; and then relate that information to the possible construction of democratic classrooms that are a critique of both authoritarian and status quo democratic systems, and the implications for teacher educations programs.

Method

ERIC and PsychInfo were exhaustively searched by computer through October 1991 under the following term combinations: Moral Judgement Interview (MJI) X teachers; Defining Issues Test (DIT) X teachers; moral reasoning X teachers; moral development X teachers;

moral judg(e)ment X teachers; and similar terms were also paired with "education majors" and "education undergraduates" in ERIC searches. All articles identified through this search (in addition to a couple unpublished ones), that utilized MJI or DIT scores in assessing in-service or pre-service teachers' moral reasoning, are now included in the annotated reference lists in Appendices 1-4 of this paper.

The search focused on the use of the two most systematically validated measures of principled moral reasoning, the Defining Issues Test (Rest, 1979, 1986, 1990) and the Moral Judgment Interview (Kohlberg, 1984; Colby & Kohlberg, 1987). The Moral Judgment Interview (MJI) is a semi-clinical open-ended interview in which subjects are asked to respond to standard hypothetical moral dilemmas. Responses are then coded for stage, based on a theory of the development of psychological structure of justice reasoning (Kohlberg, 1981, 1984; Colby Kohlberg, 1987). Five stages have been empirically established: 1) Heteronomous, 2) Individualistic, Instrumental, 3) Interpersonally Normative, 4) Social System, and 5) Social Contract, Principled. The MJI has established levels of inter-

rater, test-retest, alternate form and internal consistency reliability; as well as construct and predictive validity (Colby & Kohlberg, 1987). The current scoring manual (Colby & Kohlberg, 1987) describes two methods of deriving summary scores. One is called a Global Score and is based on a 9 point ordinal scale of stages (1, 1/2, 2, 2/3, 3, 3/4, 4, 4/5, 5); based on cognitive developmental theory in the Piagetian tradition this scoring method remains true to the concept of discontinuous development, and a non-equal interval scale (i.e., the "distance" between stages is not constant). The other method delivers a Weighted Average Score (WAS), which treats the data as if they were continuous, and equal interval, across a 500 point scale. The WAS generally corresponds to the global scores, such as 100 = Global Stage 1, 350 = Global Stage 3/4, etc.

The Defining Issues Test (DIT) is based on Kohlberg's stage theory of moral reasoning (Rest, 1979, 1986, 1990). Whereas the MJI uses three dilemmas on a form, and asks for the subject's spontaneous production of responses, the DIT uses six dilemmas and a multiple choice format of selecting responses. The choices

following each dilemma represent the range of Kohlberg's stages, and have been equalized in length and complexity of vocabulary. The most widely used and validated summary score of the DIT is the P percent score. The P% score represents the relative importance that the subject imparts to morally principled responses to the 6 presented dilemmas. In raw form the P score can range from 0 - 56; on a percentage basis it can range from 0 - 95; unfortunately, many studies have not directly specified whether they have used raw P scores or P% scores (Schlaefli, Rest, & Thoma, 1985). The DIT has established levels of test-retest and internal consistency reliability; as well as construct and predictive validity (Rest, 1979, 1986).

In sum, the MJI measures expressive moral reasoning and identifies whether a subject spontaneously emits principled thought, and the DIT measures receptive moral reasoning and identifies whether a subject recognizes and prefers principled thought.

Results

See Table 1 for the types of studies that were included in this review. Table 2 summarizes studies

which reported MJI scores for teachers and education majors; Table 3 does likewise for the DIT. The appendices offer annotated reference lists of applicable studies; the appendices refer to more studies than the tables, as some studies that identified use of the MJI or DIT did not report means or ranges of those scores, and those studies were not included in the tables.

Based on the MJI it appears most teachers spontaneously construct their thought in Kohlberg's stages 3 and 4, or the interpersonally normative and the social system; in fact, most are transitional between these two stages (Global score 3/4 or WAS of 350). Of the 5 studies of in-service teachers, 4 showed means at stage 3/4, and one study, the smallest (N=8) showed the teachers to be stage 4/5. The one MJI study with pre-service teachers indicated a mean of stage 3. Both pre-service and in-service teachers demonstrate individual stages ranging from 2(1) to stage 5.

In terms of the DIT, most studies find both in-service and pre-service teachers with P% in the 40s. Table 2 cites 25 different publications, and mean

scores from at least 41 different groups in those studies. In general the studies with undergraduates in education show a range of P% means from the 30s to the 40s; and the studies with inservice teachers show a typical range of P% means in the 40s and 50s. Reported individual P% scores ranged from below 10 to 80.

Discussion

MJI scores of stage 3 or 4 indicate that teachers' morality is structured based on interpersonal expectation (stage 3), or the rules of the system(s) in which the teachers are involved (stage 4). In Kohlbergian terms, these teachers are capable of maintaining status quo social structures, but they would not have the criteria and concepts to construct, develop, or create new social structures (such as classrooms, district governance, or a qualitatively new form of curriculum). To do the latter, teachers need to think at the postconventional, social contract, principled stage 5 level.

DIT scores represent the relative importance given to postconventional, social contract, principled thought by the subject. Scores of P% in the 30-50 range indicate that the teachers prefer principled

thought between 1/3 and 1/2 of the time; which indicates that teachers prefer conventional (or possibly pre-conventional), stage 3 or 4 thought, 1/2 to 2/3 of the time.

If we accept democracy as a warranted social structure; and if we accept Dewey's argument that to foster the development of democratic citizens we need classrooms that are democratically structured; we then must ask the question: Can teachers do this?

The data from the MJI and DIT studies indicate that teachers are subject to the status quo structures of their environments. This means that if they are hired into a school that supports, encourages, and models authoritarian classrooms; so will they. It also means that if they are hired into a school that supports, encourages, and models democratic classrooms they will be able to do likewise; however, they will not be able to offer criteria to critique the current model of democracy in their school. It is important to remember that data that are based on means applies to many, or most, subjects, but that it doesn't necessarily apply to a particular individual in a population. In other words, some teachers are

principled thinkers and can construct and reconstruct progressive democratic structures in their room, school, or district; but most can't.

In the language of hope and possibility, although most teachers don't spontaneously produce principled thought, they can recognize its importance in many situations; that is, the DIT results show that most teachers can prefer principled thought to conventional thought a substantial number of times. This implies that when teachers have leaders that advocate principled critique of status quo social structures, that the teachers have the ability to recognize the importance of this, and collaborate toward that end.

Implications for teacher education programs

Although several researchers are pessimistic (Tan-Willman, 1978; Wilkins, 1980) about the implications of the moral reasoning levels of teachers, others have shown that some forms of collegiate programs for teachers have a significant impact on increasing teachers' preference for principled thought. In particular, versions of the Kohlbergian classic dilemma discussion (Blatt & Kohlberg, 1977; Galbraith & Jones, 1976), and Deliberate Psychological Education (DPE)

(cf. Mosher & Sprinthall, 1970) seem to have a distinct impact on the development of teachers' moral reasoning. Schlaefli, Rest, & Thoma (1985) completed a meta-analysis of 55 studies on the effects of moral education, including 6 studies included here. In general they found small to moderate effect sizes for most programs that used dilemma discussion or DPE; in specific, for studies with teachers, they showed significant large (Wong, 1977), moderate (Sprinthall & Bernier, 1977[1]; Oja & Sprinthall, 1978), and small (Hurt, 1977) effect sizes for DPE, and a moderate effect size for dilemma discussion (Shafer, 1978). They also found that studies which had brief interventions ("short term", less than a total of 3 weeks) tended to show non-significant effect sizes (cf. Adams, 1980, who used a brief seminar/dilemma discussion model). Additionally, Holman's (1979) dilemma discussion course with pre-student teachers showed non-significant gains in principled thought, but did show significant increases in stage 4 thought (movement toward principled thought).

Author's questions

[1]The same data are reported here under Bernier, 1980.

I would like to engage teacher educators on these questions:

1. Do the above review and conclusions respect teachers, yet point to a valid concern?

2. Other than dilemma discussion and DPE, what can we do to help teachers develop principled thought? If we had a large degree of freedom, how should we design a teacher education program to do this?

3. Given the empirical data for teachers' ability to critique ideology, what can we do to assist teachers to become transformative intellectuals (Giroux, 1988; Freire, 1970), that can not only critique authoritarianism, but can critique forms of democracy?

4. What are the relationships among caring and love in the classroom and principled thought and democratic structure (Noddings 1984, 1986; Gilligan, Ward, & Taylor, 1988).

5. Do the data presented here warrant a statistical meta-analytic study?

6. Are there more published or unpublished studies on this topic that I may obtain?

Please feel free to communicate with me on these topics by mail or phone: Lewis-Clark State College,

Division of Education, Lewiston, ID, 83501, USA; 208-799-2338.

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Appendix One
In-service teachers and the Moral Judgement Interview

Althof, W. (1990). Teachers' moral judgment and interpersonal problem solving in the classroom. Presented at the 15th Annual conference of Association for Moral Education, Notre Dame.
Subjects: "Teachers from all branches" (p. 9) in Salzburg, Austria. N = 42; 22 female, 20 male.
Moral reasoning, average and variation: The average was stage 3/4 or a WAS[2] between 343 - 359; range was from 2(1) to 5(4) (it was scored on a thirteen point ordinal scale). Inter-rater reliability was not reported.

DeFlumeri, J. (1982). The effects of locus of control and interpersonal trust on teachers' moral reasoning. Dissertation Abstracts International, 43, 1086A. (University Microfilms No. DA 8220920).
Subjects: "consisted of 77 teachers (46 females, 31 males) ranging in age from twenty to seventy years of age [mean age 35]. They were volunteers from 29 elementary, middle, and high schools across four northeastern states" (p. 34).
Moral reasoning, average and variation: Both the mean and the median are between stages 3 and 4; the range is stage 2 to stage 5; MMS[3] shown a median of 360.1, a mean of 357, and a standard deviation of 67. Inter-rater reliability was r - .21 (N = 8).

Dionne, J. (1990). Experimentation of JCA at Boscoville. Presented at the 15th Annual conference of Association for Moral Education,

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[2]WAS is the acronym for weighted average score, a statistical manipulation of the MJIs stages, forcing it into an equal interval scale; approximately, 100 = stage 1, 200 = stage 2, etc.

[3]It appears that this study used "Structural Issue Scoring", rather than the Colby & Kohlberg 1987 "Standard Issue Scoring". As a rule of thumb, the earlier version (Structural issue scoring) indicated greater stage advancement compared to the current method, so subtract 1/2 to 1 full stage level to approximate the current scoring method (Kohlberg, 1976). MMS stands for moral maturity score and was the predecessor of the WAS.

Notre Dame.
Subjects: 8 educators in an adolescent penal institution in Boscoville, Canada.
Moral reasoning, average and variation: Mean is stage 4/5; mean WAS was between 429.6 - 438; range was stages 4 and 5; WAS 406-488 (no inter-rater reliability reported).

Hiett, S. L. (1978). Moral judgment of disruptive and nondisruptive students and their teachers. Dissertation Abstracts International, 38, 4047A. (University Microfilms No. 77-29,251)
Subjects: A random sample of thirty 6th or 7th grade teachers drawn from 3 junior high schools in an urban, southeastern United States setting. A wide range of subject areas were represented; half were female, half male; 21 white, 9 black; 19 with B.A.s, 11 with M.A.s. Means years of experience was 13.2; range 2-32.
Moral reasoning, average and variation: The mean WAS was 334.0 (s.d. 57.3), with a range of 250-492 (global stage scores were not reported). Inter-rater reliability was assessed at r = .94 and 85% of 20 randomly selected protocols were within 1/3 stage agreement.

Liberman, D., Gaa, J. P., Frankiewicz, R. G. (1983). Ego and moral development in an adult population. The Journal of Genetic Psychology, 142, 61-65.
Subjects: 18 randomly selected education graduate students; and 3 selected, N = 21.
Moral reasoning, average and variation: Not reported. The present author wrote to the Liberman, Gaa, and Frankiewicz at the address in the 1983 article, in March 1991, but no response was received.

Linn, R. (1982). The performance of early childhood educators on moral action dilemma as related to their stages of moral judgment. Dissertation Abstracts International, 42, 3861A. (University Microfilms No. DA 8203894)
Subjects: 38 volunteer early childhood educators from the Boston area. Age range 21-30, and having served at least 1/2 year as a full time teacher in a day care center; 33 female, 5 male; 29 whites, 7 blacks, 2 hispanics. All subjects had B.A.s or M.A.s "in some form of early childhood education" (p. 38).
Moral reasoning, average and variation: It is not clear

if Global Stage score or WAS scores, or something in between, were reported (p. 57). The mean score was 3.74 (s.d. 0.43) and the median was 4.0; the range was 3(2) to 4(5). Inter-rater reliability was not reported.

Appendix 2

In-service teachers and the Defining Issues Test

Bailey, D. A. (1986). The relationship between stages of moral judgment and elementary classroom teachers' perceptions of disturbing students. Dissertation Abstracts International, 46, 3315A. (University Microfilms No. DA 8529638) (96 teachers)

Subjects: 96 teachers in rural Northwest Missouri.

Moral reasoning, average and variation: The volume is non-circulating (a microfiche copy is on order). The abstract indicates that there were teachers at both the pre-principled and principled levels of moral reasoning.

Bernier, J. E. (1980). Training and supervising counselors: Lessons learned from deliberate psychological education. Personnel and Guidance Journal, 59, 15-20.

Subjects: "18 in-service counselors and teachers" (p. 15), mostly from urban schools.

Moral reasoning, average and variation: Mean P-score was .568 to .658 (s.d. .134 - .107). [Does not explicitly state whether P- or raw scores were used.]

Bloom, R. B. (1976). Morally speaking who are today's teachers? Phi Delta Kappan, 57, 624-625.

Subjects: a) Education graduate students, N = 82; b) liberal arts graduates with subsequent teacher certification, N = 33; c) teachers' college graduates, N = 27.

Moral reasoning, average and variation: a) Education graduate students, mean = 29.8; b) liberal arts graduates with subsequent teacher certification, mean = 30.6; c) teachers' college graduates, mean = 26.7.

Cistone, D. F. (1980). Levels of moral reasoning compared with demographic data among teachers, administrators, and pupil personnel employees enrolled in graduate schools. Dissertation Abstracts International, 41, 2367A. (University Microfilms No. 8029048).

Subjects: N=189, of teachers, administrators, & pupil personnel employees.

Moral reasoning, average and variation: This volume is missing from the USC library; a microfiche is on order.

Conroy, B. J. C. (1987). Teachers' moral reasoning and their attitudes and behaviors regarding discipline. Dissertation Abstracts International, 47, 3917-18A. (University Microfilms No. 8703912)
Subjects: 64 regular classroom teachers; 31 male, 33 female; 8 teachers in their 20s, 16 in their 30s, 28 in their 40s, 10 in their 50s, 2 in their 60s.
Moral reasoning, average and variation: of the N=58 usable protocols, the mean was 43.37.

Deal, M. D. (1979). The relationship of philosophy of human nature, level of cognitive moral reasoning and pupil control ideology of graduate students in a department of curriculum and instruction. Dissertation Abstracts International, 39, 4688A. (University Microfilms No. 7903660)
Subjects: 40 teachers in masters program.
Moral reasoning, average and variation: the volume is non-circulating; a microfiche copy is on order.

DeYoung, A. M. (1982). A study of relationships between teacher and student levels of moral reasoning in a Japanese setting. Dissertation Abstracts International, , . (University Microfilms No.)
Subjects: included 5 groups; non-education majors from two junior colleges; 10 Japanese Eiwa Junior College teachers in a English department; 17 Japanese Shizudai university teachers in an English department; and 30 American teachers teaching in Japan, at all levels. Most subjects were affiliated with Christianity.
Moral reasoning, average and variation: the Japanese junior college teachers mean = 27.1 (sd=4.79), range 10-36; Japanese university teachers mean = 26.29 (sd=7.20), range 15-39; American teachers mean = 29.3 (sd=6.96), range 18-41. Based on DeYoung's discussion of the DIT, it appears these are raw P and not P% scores.

Gerety, M. A. (1980). A study of the relationship between the moral judgment of the teacher and the moral atmosphere in the classroom. Dissertation Abstracts International, 41, 1952A. (University Microfilms No. 8024101)
Subjects: "This study was conducted in public

secondary schools, a junior high school, and a high school, located in Boston", MA, USA. "the population served by the schools is primarily white with middle to upper middle class families". "The sample consisted of 30 teachers randomly selected from a total population of 70." (p. 76).

Moral reasoning, average and variation:

Group	RawP	P%	sd	range
Jr. Hi.Teachers	33.22	55	8.74	18(30%) - 46(77%)
Sr. Hi.Teachers	28.52	47	8.25	13(22%) - 43(72%)
Total	29.93	48	8.53	13(22%) - 46(77%)

Griffore, R. J., & Lewis, J. (1978). Characteristics of teachers' moral judgment. Educational Research Quarterly, 3, 20-30.

Subjects: were 60 female and 18 male teachers (N=78) enrolled in on-campus and off-campus education classes during the summer of 1977 at Michigan State University; the mean age was 28.7 (sd=6.08); mean numbers of teaching years was 5.49 (sd=4.80). Grades taught were from preschool to high school, and a there was a wide variety of subjects taught.

Moral reasoning, average and variation: the P% score mean was 43.28 (sd=13.98), raw P score mean was 25.97 (sd=3.39).

Hilton, J. B. (1990). Teachers' moral reasoning and students' perception of teacher affect. Dissertation Abstracts International, 50, 1986A. (University Microfilms No. DA 8921475).

Subjects: "150 secondary school teachers in Sumpter" South Carolina, USA, were invited to participate in a study, 65 agreed to do so.

Moral reasoning, average and variation: Mean P-score for the teacher sample was 35.80 (sd=9.9); median 36.7; mode 47; range was 18 to 54.

Holman, R. B. (1980). The effects of a discussion course on the pre-student teachers' moral reasoning. Dissertation Abstracts International, 40, 4382A. (University Microfilms No. 8003008).

Subjects: students enrolled in "pre-student" teaching at the University of New Mexico; 13 volunteers became an experimental group and 50 students became a control group.

Moral reasoning, average and variation: The range of scores included the mean of the experimental group's

posttest, 22.8 (sd=7.01) to the control group's posttest, 26.3 (sd=9.59).

Johnston, M. (1989). Moral Reasoning and Teachers' Understanding of Individualized Instruction. Journal of Moral Education, 18, 45-59.
Subjects: [present author inadvertently overlooked obtaining this article]
Moral reasoning, average and variation:

Johnston, M., & Lubomudrov, C. (1987). Teachers' Level of Moral Reasoning and Their Understanding of Classroom Rules and Roles. Elementary School Journal, 88, 65-77.
Subjects: were 27 teachers enrolled in a M.Ed. program at the University of Utah.
Moral reasoning, average and variation: the P score range was 9 to 41.

Johnston, M., Lubomudrov, C., & Parsons, M . (1982). The cognitive development of teachers: Report on a study in progress. The Moral Education Forum, 7, 24-31, 36.
Subjects: 25 practicing school teachers.
Moral reasoning, average and variation: Range of P scores 7 - 45 (this study is related to Johnston & Lubomudrov, 1987, reported above).

Joyner, G. L. (1985). Moral reasoning and discipline choices: Differences among students, faculty, and administrators in a liberal art college. Dissertation Abstracts International, 46, 897A.
(University Microfilms No. DA8507377).
Subjects: were "selected from members of the administration, faculty, and student body at a four-year, private, church related, liberal arts college in eastern North Carolina" (p. 48). Of the 41 administrators (24 female, 17 male), 34 participated and 31 had usable DITs; of the 45 faculty members (35 males, 10 females), 38 participated, and 34 had usable DITs. These faculty taught core curriculum in the traditional liberal arts.
Moral reasoning, average and variation: The short form DIT was used; college administrators had a mean of 37.90 (sd=17.56), and the faculty mean was 43.38

(sd=19.72) (a student sample of 113 showed a mean of 26.41 [sd=16.23]).

Oja, S. N., & Sprinthall, N. A. (1978). Psychological and moral development for teachers: Can you teach old dogs? Character Potential: A Record of Research, 8, 218-225.
Subjects: were in-service elementary and secondary teachers, and other support personnel, taking summer classes at the University of Minnesota; N = 48.
Moral reasoning, average and variation: A short form of the DIT was used (with 3 stories instead of six). Raw means were reported between 13.4 (6.6') and 18.3 (sd= 0.96), and % scores were listed as between 46.3% and 63.1%.

Wong, J. M. B. (1977). Psychological growth for adult women: An in-service curriculum intervention for teachers. In G.D. Miller (Ed.), Developmental theory and it application in guidance programs. St. Paul: Minnesota Dept. of Education.
Subjects: N=54; female public school teachers from a suburban school near Minneapolis.
Moral reasoning, average and variation: Means of P% scores across 3 experimental and 3 control groups ranged from 25.0 (sd=9.2) to 39.5 (sd=6.3).

'It was not clear if the standard deviations applied to the raw or % scores.

Appendix 3

Pre-service Teachers and the Moral Judgement Interview

Stange, B. L. (1977). Levels of moral reasoning in education undergraduates. Saskatchewan Journal of Educational Research and Development, 8, 29-35.

Subjects: N=114 "students enrolled in an introductory education course at the University of Regina" (p. 29); 70 were female, 44 were male.

Moral reasoning, average and variation:

Stage	N	%Frequency
2	6	5.3
2(3)	8	7.0
2/3	4.	3.5
3(2)	23	20.2
3	50	43.9
3(4)	6	5.3
3/4	2	1.8
4(3)	9	7.9
4	3	2.6
4(5)	1	.9
5	2	1.8

A random sample of 10 protocols showed inter-rater r=.78.

Appendix 4

Pre-service Teachers and the Defining Issues Test

Adams, R. D. (1982). The effect of a moral education seminar upon the stage of moral reasoning of student teachers. Dissertation Abstracts International, 42, 3815A. (University Microfilms No. DA 8205144)
Subjects: 72 student teachers; 41 were elementary majors and 31 were secondary majors.
Moral reasoning, average and variation: experimental (N=30) pretest mean for P scores was 26.1 (sd=9.4), and posttest mean was 31.9 (sd=8.9); control (N=42) pretest mean was 29.7 (sd=10.2) and posttest mean was 28.9 (sd=8.5).

Black, H., & Phillips, S. (1982). An intervention program for the development of empathy in student teachers. Journal of Psychology, 112, 159-168.
Subjects: were 105 student teachers "at a Catholic Teachers College in metropolitan Sydney" (p. 161); 91 females, 14 males.
Moral reasoning, average and variation: although given the DIT, no scores were reported.

Bloom, R. B. (1976). Morally speaking who are today's teachers? Phi Delta Kappan, 57, 624-625.
Subjects: Education majors at liberal arts colleges and universities, N=13.
Moral reasoning, average and variation: Mean = 32.4.

Bloom, R. B. (1978). Discipline: Another face of moral reasoning? College Student Journal, 12, 356-359.
Subjects: "One hundred eighty nine undergraduate students...in the School of Education at the College of William and Mary" (p. 356)
Moral reasoning, average and variation: DIT scores not directly reported.

Carella, S. D. (1977). Discipline judgments of disruptive behaviors by individuals and dyads differing in moral reasoning. Dissertation Abstracts International, 38, 1990A. (University Microfilms No. 77-21,368)
Subjects: 48 "male and female undergraduate students in a teacher education program" (p. 7). They were chosen

from a population of 110 students by selecting 16 students from the upper, middle, and lower twentieth percentiles.
Moral reasoning, average and variation: mean P value was 24.65 (sd=9.75) in pretest and 25.71 (sd=8.71) in posttest.

Green, L. L. (1981). Safety need resolution and cognitive ability as interwoven antecedents to moral development. Social Behavior and Personality, 9, 139-145.
Subjects: were 139 "students completing the first year of the Teacher Education Program with a B or better, at a south-eastern university" (p. 140); middle to upper-middle class, 26% male.
Moral reasoning, average and variation: The mean P% score was approximately 42, with a range of approximately 23 to 49.

Hurt, B. L. (1977). Psychological education for teacher education students: A cognitive-developmental curriculum. The Counseling Psychologist, 6, 57-60.
Subjects: Three groups of teacher education students, for a total N=54.
Moral reasoning, average and variation: The mean P scores ranged from 28.7 (sd=7.4) to 33 (sd=5.9). Based on Schlaefli, Rest, & Thoma (1985), these are believed to be raw P, and thus would the means would range from 47.78 to 54.65 in P% scores.

McGeorge, C. (1975). Susceptibility to faking of the Defining Issues Test of moral development. Developmental Psychology, 11, 108.
Subjects: were "146 first-year teachers college students, 21 males and 125 females, with a mean age of 19.02."
Moral reasoning, average and variation: Raw P score means ranged between 24.6 and 27.4.

McNergney, R. F., & Satterstrom, L. (1984). Teacher characteristics and teacher performance. Contemporary Educational Psychology, 9, 19-24.
Subjects: "were elementary school student teachers (4 males and 52 females) from a large midwestern university enrolled in their final academic quarter before graduation" (p. 19).

Moral reasoning, average and variation: the raw (?) P score mean was 5.13 (sd=1.61). This is an amazingly low score; the present author wonders if was mistakenly reported (?).

Napier, J. D. (1978). The validity of preservice teacher use of Kohlberg's Issue Stage Scoring System. Theory and Research in Social Education, 6, 16-30.
Subjects: were 22 preservice social studies teachers; 11 female, 11 male.
Moral reasoning, average and variation: the raw P score mean was 24.54 (sd=8.12), with a range of 6 to 36.

Parsons, M. J., Holt, L. A., Kauchak, D., & Peterson, K. (1983). A development study of levels of moral judgement and perception of ideal teacher roles. Focus on Learning, 9, 25-31.
Subjects: "were 71 beginning candidates in the elementary and secondary teacher education program at the University of Utah in Fall quarter, 1979" (p. 27).
Moral reasoning, average and variation: 56 participants had a raw P score less than 30, and 15 had P greater than 30.

Shafer, J. E. (1979). The effects of Kohlberg dilemmas on moral reasoning, attitudes, thinking,locus of control, self-concept, and perceptions of elementary science methods students. Dissertation Abstracts International, 39, 4850A. (University Microfilms No. 7902856).
Subjects: were "fifty-seven female students in two separate sections of Elementary Science Methods classes" (p. 43), average was 22.
Moral reasoning, average and variation: mean P scores were between 22.19 (sd=7.14) and 29.19 (sd=9.47).

Tan-Willman, C. (1978). A look at the moral reasoning of prospective Canadian teachers. Psychological Reports, 43, 172-174.
Subjects: N=256 "prospective Canadian teachers" (p. 172); 181 females (mean age 23.5), and 75 males (mean age 25.3).
Moral reasoning, average and variation: the mean P% score was 42.07 (sd=13.66)

Taylor, J. B., Waters, B., Surbeck, E., & Kelly, M.

(1985). Cognitive, psychosocial, and moral development as predictors of pre-service teachers' ability to analyze child behavior. College Student Journal, 19, 65-72.
Subjects: "included 141 university juniors and seniors with declared majors in Early Childhood, Elementary, and Special Education" (p. 66), and 10 students outside education; all but 3 were white females.
Moral reasoning, average and variation: the raw (?) P score mean was 22.16 (sd=8.34), with a range of 4-48.

Thoma, S. J., & Rest, J. (1987). Moral Sensitivity and Judgment in the Development and Performance of Student Teachers. Moral Education Forum, 12, 15-20.
Subjects: "consisted of 30 University of Minnesota College of Education students (93% female) recruited from a pool of 74 first year elementary and secondary education majors...ranged in age 21 to 45.... Of these subjects, 21 completed their student teaching during the 1985/6 school year" (p. 16).
Moral reasoning, average and variation: The 21 students teachers had a mean P% of 47.70 (pretest) to 54.37 (posttest); the 8 students without teaching experience had mean P% of 39.16 (pretest) to 41.66 (posttest).

Wilkins, R. A. (1980). If the moral reasoning of teachers is deficient, what hope for pupils? Phi Delta Kappan, 61, 548-549.
Subjects: were "55 preservice high school teachers enrolled at the Western Australian Institute of Technology...These students are graduates pursuing a one-year diploma course in education as preparation for high school teaching" (p. 548).
Moral reasoning, average and variation: the mean P% score was 40.8 (sd=7.9).

Yeazell, M. I., & Johnson, S. F. (1988). Levels of moral judgment of faculty and students in a teacher education program: A micro study of an institution. Teacher Education Quarterly, 15, 61-70.
Subjects: were "37 students enrolled in an undergraduate introductory education class, many of whom were freshmen" and "40 student teachers, who were either graduating seniors or holders of bachelor's

degrees seeking teacher certification" (p. 62) and 33 graduate students in education and 22 education faculty (17 were full-time and 5 were teaching assistants); total N=132; 54 males and 78 females; all in West Virginia University.

Moral reasoning, average and variation:

Level	Mean P%
Undergrad	37.8
Student Teachers	37.0
Grad Students	43.3
Faculty	55.8

Table 1

Characteristics of Studies of Teachers and Moral Reasoning

Type of Publication[5]

- Dissertations: 12
- Journal articles: 17
- Book chapter: 1
- Unpublished: 2

Type of Sample[6]

- Students beginning an education major: 10
- Advanced education majors/Student teachers: 9
- In-service or M.Ed. candidates: 17
- College faculty/college administrators: 3

Type of Measure

- Moral Judgement Interview: 6
- Defining Issues Test: 25

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[5]The studies listed are those included in Tables 2 & 3 below; only studies reporting means or ranges are included here.

[6]The number of samples exceeds the number of studies, as some studies had several samples.

Table 2

The Moral Judgment Interview with Teachers and Education Majors

Author & Subjects	Mean(s)	Variation[7]
Althof (1990),		
42 teachers,	WAS 343-359	
Salzburg, Austria.	Global 3/4	2(1)-5(4)
DeFlumeri (1982), 77	MMS 357	sd=67
teachers, Northeastern	Global 3/4	2-5
USA		
Dionne (1990),		
8 educators, Quebec,	WAS 430-438	
Canada.	Global 4/5	4-5
Hiett (1978),		
30 teachers, Southeastern	WAS 334	sd=57.3
USA		250-492
Linn (1982), 38	3.74	sd=0.43
educators, Boston USA		3(2)-4(5)
Stange (1977), 114		
students in Regina,	3	2 - 5
Canada		

[7]The "variation" will be either a standard deviation applying to the mean directly to its left and designated by "sd=...", or it will be the range of scores.

Table 3
The Defining Issues Test with Teachers and Education Majors

Author	Sample	Mean(s)[1]	Variation
Bernier (1980)	N=18 counselors & teachers urban USA	56.8 - 65.8	sd=13.4 - 10.7
Bloom (1976)	a) N=82 graduate students b) N=33 liberal arts graduates with certification c) N=27 recent graduates	29.6[2] 30.6[2] 26.7[2]	
Conroy (1987)	N=58, teachers, USA	43.37	
DeYoung (1982)	a) N=10, jr college teacher b) N=17, university teachers a & b both from Shizouka, Japan c) N=30, American teachers in Japan	45.2[5] 43.8 48.8	range 16.7 - 60 range 25 - 65 range 30 - 68
Garety (1980)	N=30 secondary teachers Boston, USA	48	range 22 - 77
Griffore & Lewis (1978),	N=78 teacher Michigan, USA	43.28	sd=13.98
Hilton (1990)	N=65 teachers South Carolina, USA	35.80 Median 36.7	sd=9.9 range 18-54
Johnston & Lubomudrov (1987)	N=27 M.Ed. candidates Utah, USA		range 9 - 41
Joyner (1985)	a) N=31college administrators b) N=34 college faculty, North Carolina, USA (short form used)	37.90 43.38	sd=17.56 sd=19.72
Oja & Sprinthall (1978)	N=48 teachers and support personnel, Minnesota, USA (short form)	46.3 - 63.1	
Wong (1977)	N=54 female teachers Minneapolis, USA	41.6 - 65.8	sd=9.2 sd=6.3
Yearell & Johnson (1988)	a) 33 graduate students b) 22 education faculty, all in West Virginia, USA	43.3 55.8	
Adams (1982)	N=72 student teachers Oklahoma (?), USA	26.1[3] - 31.9	sd=9.4 sd=8.9
Bloom (1976)	N=13 education majors USA	32.4[2]	
Carella (1977)	N=48 ed students Oklahoma(?), USA	41.08[5]- 42.85	Raw P? sd=9.75 Raw P? sd=8.71
Green (1981)	N=139 students with grades of "B or better" students, Southeastern USA	42	range 23 - 49
Holman (1980)	N=63 pre-student teacher, New Mexico, USA	38.0[5] - 43.8	Raw P(?) sd=7.01 Raw p(?) sd=9.59
Hurt (1977)	N=54 ed students Minnesota(?) USA	47.78[5] - 54.65	
McGeorge (1975)	N=146 first-year students, Christchurch(?), New Zealand	41 - 46	
McNergney & Satterstrom (1984)	N=56 student teachers, Midwestern USA	5.13[4]	sd=1.61
Napier (1978)	N=22 social studies majors Georgia(?), USA	40.9	range 10 - 60
Parsons, Holt, Kauchak, & Peterson (1983)	N=71 beginning ed majors Utah, USA	N=56 < 50 N=15 > 50	
Shafer (1979)	N=57 students in Methods classes, USA	37.0[3] - 48.7	sd=7.14 for Raw P sd=9.47 for Raw P
Tan-Willman (1978)	N=256 prospective teachers Toronto(?), Canada	42.07	sd=13.66
Taylor, Waters, Surbeck, & Kelly (1985)	N=141 junior and seniors Alabama(?), USA	36.9[5]	range 6.67 - 80 sd=8.34 (of the raw P)
Thoma & Rest (1987)	N=30 students Minnesota, USA a) 21 student teachers b) 8 ed majors	 48 - 54 39 - 41	
Wilkins (1980)	N=55 seniors in Western Australian	40.8	sd=7.9
Yearell & Johnson (1988)	a) 37 first year students b) 40 student teachers all in West Virginia, USA	37.8 37.0	

[1] These means are intended to represent Pt scores. In some articles it was not clear if raw P scores or Pt scores were reported. If the present author "guessed" they were raw scores, he has converted them to Pt scores in this column. When a range of means are presented in this column, they refer to different experimental or control groups used in the experiment; the lowest mean and the higest mean are reported here.

[2] It is not clear if these are raw P or Pt.

[3] The author's discussion of the DIT instrument laplies that he/she was using Pt scores.

[4] This is so low the present author assumes it was mistakenly reported.

[5] Converted from what was thought to be a raw P to Pt. Likewise with the range scores.

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